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THE WEEKLY BEE JOURNAL

ESTABLISHED
IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN
1861.

Chicago, Ill., July 9, 1884.

VOL. XX.—No. 28.

THE WEEKLY EDITION

OF
**THE AMERICAN
BEE JOURNAL**

PUBLISHED BY
THOMAS C. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, \$2 a year; Monthly, \$1.

PREMIUM.—Any one sending one new subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

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THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

Topics Presented in this Number.

Another Falsehood Exposed	435
Apiarist or Apiator?	444
Bee-Keeping for Profit	440
Bee-Keeping in New York	443
Bees Doing Nicely	444
But Few Swarms	444
Candied Honey in Kegs	443
Collecting Honey Plants	437
Comb Honey Rack Again	440
Convention Hand Book	446
Correspondence	437
Eccentricities in Queen Breeding	443
Fastening Starters, etc.	436
Good Honey Yield	444
Hiving Swarms of Bees	437
Honey and Beeswax Market	444
Honey Candying, etc.	443
How to Clean Barrels for Honey	442
Large Honey Flow	444
Local Convention Directory	443
Maltine	443
Marketing Extracted Honey	441
Natural Swarming	436
Norfolk, Ont., Convention	442
Perplexing Beginners	436
Prospects for Honey in California	444
Reply to W. F. Clarke	441
Reversible Frames	439
Seasonable Hints	436
Special Notices	445
Swarming Fever	442
That Deep-Celled Foundation	444
Tiering up Sections	443
Transferring Bees	444
Tree-Trunk Method of Wintering	444
Bees on the Summer Stands	438
Wax Production	443
What and How	442
Why do the Bees do so?	442

Sample Copies of the AMERICAN BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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The Weekly Bee Journal	\$2 00.
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Scribner's Lumber and Log Book	2 35.. 2 25
Fisher's Grain Tables	2 40.. 2 25
Moore's Universal Assistant	4 30.. 4 25
Honey as Food & Medicine, 100 Copies ..	4 50.. 4 25
Blessed Bees	2 75.. 2 50
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The **Monthly Bee Journal** and any of the above, \$1 less than the figures in the last column.

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Emerson Binders—made especially for the **BEE JOURNAL**, are lettered in gold on the back, and make a very convenient way of preserving the **BEE JOURNAL** as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

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The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25; for 200 colonies, \$1.50.

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the English or German edition, 5 cents—one dozen, 40 cents—100 for \$2.50—500 for \$10.00—1,000 for \$15.00.—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, 50 cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-keeper's own locality, in order to create a Local Market. Price, 50 cents per 100; 500 copies for \$2.25; 1,000 copies for \$4.00. When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom. Less than 200 will have a blank where the name and address can be written.

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Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, \$1.25.

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Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, \$2.00; in paper covers, \$1.50.

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Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, 50c.

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Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, 40c.

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, 25c.

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. 75c. for the Weekly; or for the Monthly, 50c. They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, \$2 per 100. The name of the Association printed in the blanks 50c. extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, 10c. each, or \$8 per 100.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX.

CHICAGO, ILL., JULY 9, 1884.

No. 28

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Another Falsehood Exposed.

It will be remembered that Mr. Margrave, on page 424, referred to the statement of a St. Joseph grocer, that he had bought manufactured comb honey of Mr. Twichell, of Kansas City. We invited Mr. T. to reply, and here is what he has sent to us about it:

DEAR EDITOR.—I was somewhat surprised as well as amused in glancing over the BEE JOURNAL, to find, on page 424, an article by Mr. Margrave headed "Manufactured Comb Honey," in which he stated that a St. Joseph grocer told him positively that I had been selling manufactured comb honey, and that I had sold it as *manufactured honey*. Well, I hardly deem it necessary to make a long argument in self-defense on so absurd a charge, because I think that most bee-keepers, like myself and Mr. Margrave, consider the successful imitation of comb honey (except perhaps at a great expense) to be almost an impossibility. I must thank the St. Joe groceryman, however, for this much, that he gave me credit for selling the article for what it was, and not for pure honey, which is but just, for I assure my friends that if I am ever tempted to sell manufactured or adulterated honey of any kind, I will certainly sell it for what it is, and not misrepresent it. But I deny in the most emphatic terms, having ever sold to a St. Joseph merchant, or any one else, any manufactured or adulterated honey, and I am much indebted to Mr. Margrave for his kindly words in my defense. I would be pleased to have the name of the St. Joe groceryman, but do not care for the names of any of the witnesses, as Mr. M.'s word is sufficient.

I guess a good many readers of the BEE JOURNAL have seen my affidavit as to the purity and genuineness of the honey I sell, but I herewith enclose a copy which can be inserted if necessary.

There are a great many persons

who can hardly realize the perfection to which bee-culture has risen, and the almost absolute control the apiarist has over the little workers; and when they see a beautiful white, smooth, well-filled section of comb honey, they with the general and wide-spread distrust of everything and every body, hastily pronounce it a fraud. I hear this nearly every day, and I almost lose my temper at times, and want to tell them what I think of people who are so suspicious of every thing. As a rule they need watching themselves. I explain to them as well as I can how comb foundation is made and used, and how that, in a great measure, gives rise to the impression of manufactured honey.

I know no way to overcome this impression except to live it down, and let each of us try to establish a reputation for honesty and pure goods, that when we are assailed in the presence of any who knows us, we can feel sure of a generous defense.

I spare no pains and lose no opportunity of setting people's minds aright on this matter, and also to explain why extracted honey is not necessarily adulterated, because it is so much cheaper than honey in the comb. I enclose a little circular I had printed giving the latter explanation, and I would suggest to Mr. Newman that he get up a plain but brief explanation of how comb foundation is used, and how impossible it is to manufacture and fill the combs in competition with the bees, etc., etc., and place a reasonable price per 1,000 on them to his subscribers, that each may order a few for distribution and publication in as many newspapers as will give it space. This in connection with an honest reputation among honey-producers and dealers will go far toward correcting the evil, and in time, I trust, wipe it out altogether.

JEROME TWICHELL.
Kansas City, Mo., July 3, 1884.

The above puts the matter to rest so far as Mr. Twichell is concerned; but it will be only a few days until the scandal-mongers will endeavor to hitch it upon some other person or reassert it as truth, as though it had never been refuted.

Not long ago a person in this city asserted that machinery to make paraffine combs and fill them with glucose were in use at the office of the BEE JOURNAL. The person to whom

this "news" was told, was Mr. J. L. Harris, of Wheeler, Ind. As he knew there was not a particle of truth in the assertion—nor anything upon which to found such an idea—he told the scandal-monger he would give him \$1,000 if he would show him the machinery, and offered to go to the JOURNAL office with him. Of course this non-plused the "informer" somewhat, but he had no time or inclination to verify his statements. In fact it would spoil a good "story" to be convinced of the contrary.

Concerning the assertions relative to Mr. H. of Linn County, Iowa, Chas. Dadant & Son writes us on July 3, as follows:

We would say on behalf of Mr. H., that he has bought large quantities of honey from us last winter, and that we think if he fed his bees glucose and sold glucosed honey, he certainly would have little desire to buy honey at honey prices.

If it is desired, we will get up another Leaflet on the subject proposed by Mr. Twichell. We will think it over, and others can do so, and if it is demanded, it will be forthcoming.

Mr. Twichell's affidavit is, "That every pound of honey, in any shape, sold by me, is absolutely pure and free from adulteration." Even that, however, is not enough to still the tongue of the slanderer.

Our little grand-child, Maud Newman Cook, died at our residence in Chicago, on July 1, of marasmus. She was a great sufferer, but had a sweet disposition, and bore her agonies heroically. She was buried on Wednesday last in Oak Hill Cemetery, Cedar Rapids, Iowa.

The Seed Time and Harvest for July says that "The attractive appearance of the 'Bee-Keepers' Convention Hand-Book' is a sufficient recommendation to any bee-keeper desiring to secure a nice pocket companion."

Seasonable Hints.

Mr. F. L. Dougherty gives the following in the *Indiana Farmer* concerning the present honey crop, and seasonable work in the apiary:

Delude yourselves as you may with the idea that it is simply a matter of dollars and cents, or so many pounds of honey. There is something in the humming of the bees, returning well laden, that will stir the heart of the most matter-of-fact apiarist.

As we suggested a short time since, a few weeks more would decide the success or failure of the honey crop for 1884. Metaphorically we toss up our hat. The dark cloud has disappeared, the little silver lining has turned into one grand luminous cloud. With us the honey flow is bounteous.

Colonies that have cast a swarm should be examined at intervals that you may know that they have not become queenless. The young queen may have got lost on her bridal trip, and the bees with no brood in the hive from which to rear another will soon become depopulated, dwindle down and fall an easy prey to the moth, which infests all colonies at this season of the year. A safe precaution is to give a frame of eggs and brood to colonies that have cast a swarm, 12 or 14 days after the swarm came out of the parent colony.

Natural Swarming.

The following was translated from the French *Ami du Clerge* for the *Haldimand Advocate*:

Admire how obedient our little creatures are to the command of the Creator, "Increase and multiply, and fill the earth." Some of the signs indicating the near approach of a swarm. We are in the full month of June, the sun, according to the beautiful expression of the Holy Scriptures, "hath rejoiced, as a giant, to run the way," vegetation is displaying its choicest colors, flowers are distilling an abundant and ever-renewed honey. Thus broods have matured, families have multiplied, population has increased in most exuberant proportions. Already some drones have made their appearance. Behold some of them flying out in the afternoon to enjoy the aerial outing; that odor of wax you breathe with so much pleasure towards the evening; that vapor which in the early morn bathes the front of your hives; that humming which you hear, dull at first, but day after day more distinct and more pronounced, indicate that the colony is contemplating some extreme measure.

Let everything needed be then under your hand, the hives, the section frames, the water to sprinkle the swarm with, when it ascends in the air, and after it is brought down together, the cloth to preserve it from the ardor of the sun, the smoker and the veil, if needed to protect yourself against the anger of the bees; in a

word, have ready at hand all things that may be required for the swarm.

Here are some signs indicating the very near exit of swarms. Do the crowd of bees which were outside the hive enter it again, while those of the other hives remain out? Is the flight of the workers less frequent than usual? Then the swarm is preparing to leave. Or yet, do you notice in front of the hive, towards noon, in considerable group of bees which seemingly increase? Do the bees which return from pasturage, their legs loaded with pellets of pollen, join the crowd, or do they stop astonished on the alighting-board of the hive? Do the bees from the inside rush out to the platform as if to give signal, and do they return immediately? All these signs foretell an imminent departure. (Be ready!) if no obstacle is presented by rain, wind, a great drought; if, on the contrary, the weather is warm and brewing a gentle storm, if the sun shines at intervals, the swarm is also about to leave.

EGRESS OF THE SWARM.—This is one of nature's most exciting spectacles. The order of departure has been communicated to the whole colony. Hear that humming, which increases more and more, and which a bee-keeper knows well how to distinguish from any other sound! It is a swarm which rushes out into the air. The opening of the hive is not large enough, the bees rush forth like an impetuous torrent; it is a general rout; it is surprising how so many bees can come out of a hive in such a haste. The air becomes obscured by them; it is a cloud which moves on, gyrating, interlacing itself in constantly recurring circles. No sooner has the swarm entirely left the hive than it remains for a short time as if suspended in the air, and soon it seeks in the vicinity of the hive a convenient spot to alight on, sheltered from the wind or the burning rays of the sun. Look at it without anxiety, and throw not on it either water or dust, unless it tarries too long to alight, seeming as if it would soar higher in the air and escape. The bees fear water, and come down as soon as it touches them.

Perplexing Beginners.

The following from an exchange shows how some beginners in bee-culture are humbugged by clap-trap hive vendors:

A few days ago I called at a place not over 100 miles from Indianapolis, where I was shown a colony of bees in an old box. The owner had obtained a good hive, as he supposed, to give the swarm, when it left the old home. This was a box about twice the depth of a one-story Langstroth hive, larger every way, and filled with close-fitting frames about 3 inches wide. The maker of this hive left directions that when the owner wanted to make new swarms, he should simply take out the frame having the "king bee" on, and put it in a new hive and set it off by itself. As I am not in the "bee fixin'" busi-

ness, I advised the bee-keeper to go and examine some standard hive, and remarked that if I were to step in his shoes as a beginner in bee-culture, I would consider \$10 for some standard hive a good bargain, and after all he would very likely have to pay no more for it than the cost of his worthless box.

Fastening Starters in Sections, etc.

Rachel Brown, in the *Home Farm*, remarks as follows:

I have been putting starters into sections to-day, and tried the method given by S. M. Locke in his *American Apiculturist*, which is: "Take two parts rosin and one part beeswax, and melt them together. To use, take the section in one hand and the foundation in the other. Touch one edge of the strip of foundation into the heated mixture, after which touch it upon the under side of the top of the section to which it will adhere." This is a great improvement over rubbing foundation upon the section, bending it up and waxing with a brush, as we have been in the habit of doing. By this method one minute is sufficient to put in twelve.

I will give you M. H. Berry's remedy for ants about bee-hives: Put gum camphor on the enameled cloth around the edge of the bottom-board, or any place where they are troublesome; they will keep away as long as the scent of the camphor remains.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey," (only 50 cents per 100) or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a demand that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy 5 cts.; per doz., 40 cts.; per hundred, \$2.50. 500 will be sent postpaid for \$10.00; or 1000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Letters for publication must be written on a separate piece of paper from items of business.

CORRESPONDENCE

For the American Bee Journal.

Hiving Swarms of Bees.

W. Z. HUTCHINSON.

My apiary is located in an apple orchard in which there are no limbs that cannot be reached by means of a ladder. My hiving implements are two clothes baskets lined with cotton cloth, and furnished with burlap covers sewed fast at one side. I might remark, parenthetically, that a long basket, like a clothes basket, is better than a round basket for taking down swarms, as the bees often form long clusters lengthwise of the branches. I also have a step-ladder, a pair of heavy pruning shears (with these, small branches can be severed more easily and with less jar than with a knife or saw), a fine-tooth saw for cutting large limbs (I do not often use the saw, as I am opposed to cutting large limbs from the trees). I also use a quart dipper, a fountain pump, two large tin pails, and if the apiary was not located near a small stream, I should add to the above a barrel for holding water.

When a swarm begins to issue, I carry a hive to the stand that I wish the swarm to occupy, and prepare the hive for occupancy. When the bees begin to cluster, I make an examination to see if they are clustering in a favorable location for shaking them into a basket. If they have selected a spot where two or more limbs cross, or small branches are interlaced, I take the shears and clip away some of the branches, and thus secure the cluster in a convenient location for dislodgement.

If the bees are slow in clustering, at a time when more swarms are momentarily expected, I sometimes hasten matters by sprinkling the flying bees, by using the spraying attachment of the pump. When the bees are fairly clustered, I first detach a small portion of them that perhaps are adhering to some small twig, and carry them, still adhering to the twig, and place them at the entrance of the hive, without dislodging them from the twig. These bees at once commence running in and setting up that joyful hum announcing that they have found a home; and when the rest of the swarm is brought and shaken down in front of the hive, this humming at the entrance calls in the swarm at once; while, if the swarm is shaken down without this precaution, a large portion of the bees often take wing, perhaps the queen among the number, before the entrance to the hive is discovered, and the fact announced by joyful humming.

Many of the bees that take wing go back and cluster where they originally clustered, and if the queen takes wing she may go with them. If there is no small cluster that can be readily de-

tached, I then dip off a quart of bees from the lower part of the cluster and pour them down at the entrance of the hive. After some of the bees are running in at the entrance of the hive, I hold a basket close under the cluster and shake the bees into it with a quick shake, throw the burlap cover over the basket to prevent any of the bees from leaving, carry the basket to the hive, strike one end of the basket sharply upon the ground 2 or 3 times, which will shake all the bees to one end, and dislodge them from the cover; throw back the cover and shake the bees out upon the ground in front of the hive.

I do not shake them against the front of the hive, as the entrance would at once become clogged; but perhaps 18 inches or 2 feet from the hive. I do not sit right down by the hive and drive the bees in with a smoker, and keep a constant watch that the entrance is not stopped up, but I do go occasionally and see how things are progressing; and, if there is a great mass of bees clustered over the entrance, I poke them away and thus clean the way for another installment of bees to enter.

There is a great difference in swarms as regards the agility with which they will enter the hive. Occasionally there is a laggard that never gets inside the hive until the coolness of night, or till the bee-keeper with a smoker drives it in. If the bees cluster upon a small branch that I am willing to sacrifice, I cut it off and put it with the bees in front of the hive.

The fountain pump is a favorite implement with me. With it and plenty of water it is next to an impossibility for a swarm to abscond. I have had 3 or 4 swarms try to leave, but I compelled them to stay, and in one instance there were no trees near, and they clustered upon so small a shrub that I was obliged to hold it up until they had finished clustering, as it was too small to support their weight.

In controlling a swarm in the air, the spraying attachment should not be used, as the water cannot be thrown far enough; but by using the nozzle attachment, and giving a swinging or sweeping movement to the arm as the stream is thrown, the water is so scattered that it falls in a shower. The pump is also useful in preventing swarms from uniting. Only yesterday I had two swarms issue at the same time from hives only about 20 feet apart; and yet I kept them from uniting, and induced them to cluster in trees several rods apart. I did this by keeping a constant spray of water between the swarms as they came out and circled in the air; and sometimes I almost despaired of accomplishing the object, but I persevered and succeeded.

Among the colonies purchased during last year and this season, were some having queens with clipped wings, and I had more trouble with swarms from their colonies than from those with queens having unclipped wings. If the swarm is not seen the moment it issues, the queen sometimes

gets out of the hive and crawls and hops some little distance away, and while looking for her, one is liable to step on her. The bees circle about for a long time, and if another swarm issues they are almost certain to join it. When they do finally decide to return, they sometimes make a mistake and enter the wrong hive or hives; and when they do find the right hive they sometimes cluster all over the outside of it instead of going in. When the queen is released, as the bees are going in, she sometimes comes out again, after having entered the hive, thinking, perhaps, that she has not swarmed; when, of course, the bees follow her. Placing the caged queen at the entrance of the hive aids the bees in finding the hive.

Rogersville, Mich.

For the American Bee Journal.

Collecting Honey Plants.

CLARENCE M. WEED.

Honey plants are every year becoming of more importance to apiarists; as new portions of the country become settled, and the marshes of older portions are brought into cultivation, the conditions surrounding honey production are much changed. Hence an acquaintance with honey-producing plants is also becoming more important, that all such may be preserved where they are now growing in waste and out-of-the-way places, and planted where they are not growing. In view of this, as equally of many other facts, a few directions for collecting and preserving such plants may be of service. As most of the Fair managers now offer premiums for such collections, young people interested in bees and bee-keeping would derive both pleasure and profit from making and exhibiting them.

Whenever possible, collect when the plants are dry; if they are wet, more labor is required and poorer specimens obtained. Where the plants are to be carried some distance, some sort of a tin box is useful in preventing wilting. As a guide to the most important honey-producing plants and time of flowering of each, nothing is better than the list in Prof. Cook's Manual. In all cases where practicable, the fruit as well as the root, or a portion thereof, should be preserved.

DRYING.—For drying, old newspapers will suffice, but thick felt carpet-paper cut into sheets, called driers, 12 by 18 inches, are much preferable. Enough for the purpose can be obtained at any stationers or carpet dealers for a few cents. For holding the plants while drying, a sheet of thin paper, (a newspaper is good), twice the size of the driers is folded once. These are called specimen sheets, and into them the plants are placed as soon as possible after being gathered. Between each specimen sheet 2 or 3 driers are placed, and over the whole a heavy weight transmits pressure through a board slightly larger than the driers. For

a weight nothing is better than a stone weighing from 20 to 40 pounds. For very tender plants less weight should be used than for hardier ones.

Twenty-four hours after the plants are put into the press, they should be looked at, and wherever a leaf or flower is out of place, it should be placed naturally; as the plants are in a sort of wilting condition, this is easily done. At this time, also, the driers should be removed and others substituted, placing those taken out in where they will dry. This operation is repeated every day for one or two weeks, when the plants will usually be dry. This is told by placing the plant against the cheek, if it feels cold it is not yet dry.

Where very fine specimens are desired with the natural colors preserved, heated driers should be used and replaced two or three times a day. By this method I have produced specimens which rival in beauty of form and color the fresh unplucked flowers of fields and woods.

After the plants are dry they may be kept in the specimen sheets an indefinite length of time, or until they are to be mounted. For mounting either for exhibition or for private purposes, I use heavy book paper cut $11\frac{1}{2} \times 16\frac{1}{2}$ inches, this is the size used by botanists for herbariums. They cost about 2 cents per sheet. There are two methods of attaching specimens to the sheet, either by gluing small strips of paper over different portions of the plant, or by gluing it bodily to the sheet. For exhibition the latter method is much to be preferred. Any strong, light-colored mucilage will suffice. I have used with good results a solution of gum-arabic.

As dried plants are liable to insect attacks, they must be poisoned. This process is very simple; apply a saturated solution of corrosive sublimate in alcohol by means of a camel's-hair brush to all parts of the plant.

For the American Bee Journal.

Tree-Trunk Method of Wintering Bees on the Summer Stands.

WM. F. CLARKE.

This is a somewhat pompous and lengthy title for an article, I must admit, and a modest blush mantles my cheek as I read it. But there is no use in giving a small name to a big idea, which I firmly believe the one I have struck to be. For several years it has been impressed upon my mind that I should some day make

A GREAT DISCOVERY IN BEE-KEEPING

Mr. Heddon sarcastically twitted me on this point in one of his articles in the BEE JOURNAL, but it must have been a species of mind-reading on his part, for I never told any body my dream of becoming a discoverer. But I did not deny "the soft impeachment" on Mr. Heddon's part, because I inwardly felt that it would yet become true. I find it very difficult to write with that calm dignity and equanimity which befit a literary man. In fact, my hand quivers

with a tremulous excitement, so that, as the Editor can plainly see, I do not write with my usual steady chirography. I feel somewhat as Galileo did when the true theory of the universe dawned upon him, and my fellow bee-keepers must bear with me if I "blow off steam" a little at the start. To quote Puck's motto, "What fools we mortals be!" Or to make a more original remark, "Why did nobody think of this before?" It seems to me so simple and self-evident, that I am afraid somebody will yet get it before the apicultural world before I do! Life is too short, and I am too impetuous to wait two or three seasons and experiment. I must take the whole bee-keeping fraternity into my confidence, and ask each one to test the method I am about to develop, with one colony. This is a small request, and I think my brothers and sisters in apiculture will not refuse compliance with it.

PREVALENT MODES OF WINTERING BEES.

I have tried every known plan of wintering except the clamp and coal-oil-stove methods. After the disastrous experiences of Messrs. Hutchinson and Doolittle, I do not feel disposed to waste time in trying these, particularly as I feel sure I have found "a more excellent way." For myself, I must own I am not satisfied with any of the modes of wintering now in vogue. Every season the question comes up, which of them all I shall venture to adopt the coming winter. All are more or less haunted by risk and uncertainty. All result in loss, at least now and then, sometimes in very severe and crippling loss. I have felt until now, and the majority of experienced bee-keepers have felt with me, that the true mode of wintering bees has been an undiscovered secret.

A QUESTION.

In my young days, I helped clear many acres of timber land, and never felled a tree, nor heard of one being felled, that gave evidence of a colony of bees having been winter-killed in it. I would ask bee-keepers all over this broad continent if they ever saw or heard of a colony of bees being winter-killed that had its home in a hollow tree? The fact that bees winter well in hollow-tree trunks was the vein that revealed to me what I believe will prove a gold-mine to bee-keepers. "There's millions in it" of live bees, yet to be saved from perishing through the ignorance and stupidity of that very wise being called "man."

NATURE'S METHODS.

Without raising that vexed question in theology, whether nature's laws are the *dicta* of an all-regulating mind, which would bring Mr. Heddon and others after me with a sharp stick, I will simply lay down the position that the closer we can adhere to nature in our artificial arrangements, the more likely we shall be to come out right. Well, have we observed this principle in the construction and location of bee-hives? Not much.

When did a colony of bees ever voluntarily make its home in a dark, damp cellar, or a gloomy, close-pent bee-house? Or in a box or other receptacle close to the cold, damp ground? Who invented the plan of setting hives close to the surface of the earth? Where is the practical benefit of so doing? Almost the only argument in its favor I know of is, that bees, laden with honey, are apt to miss the hive and fall to the ground. But I believe more bees are gobbled up by toads in consequence of the hive's near proximity to the ground than are ever lost by having them higher up. Undeniably nature's method is to give the bee a home suspended in mid-air, away up from the damp, heavy vapors that always settle down to the earth's surface. It is man who forces this insect to live among reptiles, toads and worms, when it was made to be the companion of birds and squirrels in the tree-tops. I have arrived at the conclusion that most of our troubles in regard to wintering arise out of the absurd attempt to make a denizen of the air become a dweller on the ground.

BEE-LIFE IN A TREE-TOP.

What are the characteristics of the bee's natural home? Elevation above the damp, foul gases that by the law of gravitation sink to the surface of the earth. In winter, an abundant supply of *still air*; a long shaft of hollowness, so to speak; a crevice or opening usually some way up that shaft, and not far from the bee-nest; no upward ventilation; provision for dead bees falling away down low enough not to pollute the home of the living with their dead carcasses; and the natural gradual change of air which takes place in a long atmospheric column. We violate nearly, if not quite all these conditions in our prevailing modes of wintering bees. Is a cellar or bee-house a good place for a human being to live in? The respiratory organs of the bee are probably as sensitive as those of a human being. Tough specimens of men and women have made out to live in wretched underground bastilles for months and years, but if people in general were doomed to inhabit such places, there would probably be as much mortality among them as there is often among bees in cellars, bee-houses and earth-clamps. In the tree-top, air is filtered to the bees through a long air-shaft, the outer crevice, and by means of ventilating processes which these insects understand how and when to apply; but our customary methods give them unfiltered and foul air, often in very small proportions, and in manner that prevents their employing their own instincts in the way of artificial ventilation. More or less old bees usually die in the course of the winter. Their dead bodies lie on the bottom-board not far from their living companions. It is as though we had a corpse or two in the first story of our houses, got the diarrhoea from the bad smell, and then attributed it to the family eating oatmeal or buckwheat cakes! How delicate is the sense of smell in bees!

Can we suppose that a lot of dead bees can remain close to the frames on which the colony is clustered, and not poison them with foul odor? Finally, our methods go on the principles of securing a uniform temperature, which does not obtain in nature, but is one of man's so-called *improvements*. There is no evidence that bees are not the better for having a change now and then, if gradually brought about, by means under their own control.

HIBERNATION OF BEES.

It is generally admitted that bees hibernate; that is, go off into a state of torpor or semi-torpor, when they winter under purely natural conditions. There are differences of opinion among scientific men and practical bee-keepers as to the nature and extent of this process in the case of bees. I cannot now discuss this point at any length, but will simply say that hibernation is to a considerable extent, if not wholly, prevented by our customary methods of wintering. Among hibernating animals and insects, there is a difference of habit. The bear goes into winter quarters fat, sleeps during the cold weather, and wakes lean in the spring. His excess of adipose matter has kept him alive without eating. The squirrel and other creatures that lay in a stock of food, have several spells of torpidity during the winter, out of which they awake at the touch of warm weather, to eat. Bees are like squirrels rather than bears. They do not become fat in the fall, and sleep themselves lean, but have short terms of torpidity, out of which they awake in mild weather and take a feed. Then as the mercury goes down, they yield to drowsiness again. A little reflection will show that the tree-top conditions are favorable to the hibernation of the bee, but cellars, bee-houses clamps, and chaff-packed hives are not. They go on the principle of one uniform temperature as nearly as possible all winter. If that temperature is too warm, the bees do not go to sleep at all, but become restless, eat lots of honey, foul the hive, many old bees die, and get up what Mrs. Partington called "an antagion," and so forth. If the temperature is too low, they get cold victuals—icy honey, frozen pollen, etc., and why should not such food give a bee the colic and diarrhoea as well as human beings? Mark this, that the bee to winter naturally, must be able to take *hibernating spells*; not one, long sleep, nor one long wake, either of which will be injurious if not fatal.

MY PLAN OF WINTERING.

There is very much more to be said in the way of general discussion of points connected with the central idea, but I must simply state it, and close for the present. In brief, then, I go for the hollow tree-trunk plan of wintering; not literally, for that of course is out of the question, but the nearest approximation to it that can be got. If I had a flat-roofed building, which I have not, I would set my ex-

perimental hive on that, and have a long hollow tube connected with the hive by a hopper, and extending to within a foot or two of the ground. That I should consider a fair way of testing the theory, I have set forth; and if any bee-keeper has the chance of trying it thus, it would be well to do so. But "I have faith to believe" the thing will work without going so high up into the air, and have just completed a hive-stand embodying the principle set forth in this article. It consists of a box about table high; just the height at which you can handle bees without hurting your back. The bottom of the box is one wide board $1\frac{1}{2}$ inches thick, 20x28 inches; the dimensions calculated for a Langstroth hive. The box is tight with the exception of four auger holes covered with wire gauze, which are made within 6 inches of the top. The extra size of the box is meant to afford an opportunity to cover the hive with a rough shell in winter, and if desired, pack with chaff. I also gives a wide alighting board in front, and some shelving on the sides, and at the rear, which will be found handy during the working season. The hive to be used is without a bottom-board, but a sliding bottom-board, put in and taken out from the rear, is to be used during the honey harvest. When that is over, and all danger of comb extension is past, it is to be removed. Immediately below it is a hopper fitting tightly to the stand just beneath the hive, its flaring sides terminating in a square tube 4 inches wide each way inside, which reaches to within a few inches of the bottom of the box. The usual entrance to the hive is to be left open. Through it and through the auger holes on the four sides of the box, abundance of air will find its way into the hive. Its dead bees will choke the entrance, as they will fall to the bottom of the box. A little door in the box enables the bee-keeper to see the dead bees, dry excrement, etc., that may have dropped from above, and thus the state of the colony can be judged at a glance to the extent that these signs reveal it.

It will perhaps be asked, why not have a skeleton stand with merely the hopper and tube reaching to within a few inches of the ground? I answer, because it would not so nearly fulfill the conditions of tree-trunk wintering. My box gives me a reservoir of still air obtained 2 feet or more from the ground, and, being tight, cuts off dampness and excludes foul gases. It should be added, that the bottom-board of the box is spiked to pieces of cedar pole slightly flattened on the lower side, giving the least possible contact of the box with its round sills. My idea is now roughly out-lined, and the practical use of it will doubtless be improved upon by others whose inventive genius in that line is greater than mine.

Speedside, Ont.

The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed).

N. P. ALLEN, Sec.

For the American Bee Journal.

Reversible Frames.

J. E. POND, JR.

Are reversible frames of any real practical value, or at least sufficiently so to pay for the trouble in fitting them up so that they can be made of use? When they were first mentioned, the idea struck me as being one of value, and theoretically it is, but it proves with me to be one of those theories that after all are of no real practical value, and for the simple reason that I find I can accomplish the same results without them, in a far more simple and easy manner than I can by going to the trouble and expense of fitting up for their use.

Again, the points of superiority claimed for them are really more a matter of fancy than of real utility. Perhaps in a poor season, or at a time when honey is coming in slowly, frames may be found to be filled more completely by reversing than by allowing them to remain in their usual position; but it is to be hoped that at such times, the prudent and economical apiarist will be enabled by regular feeding in small quantities, to cause his frames to be well filled out, and while doing this, stimulate his colonies sufficiently to keep the cells filled with brood; and thus, as the old saying is, "kill two birds with one stone."

One of the chief points of superiority claimed by the advocates of reversible frames is, that by the process of reversing, the cells are filled with brood close up to the top-bars, and the bees will then more readily enter into the sections. I am aware, and have been for years, that bees deposit their stores above the brood, and have made good use of the extractor to cause them to go into sections, when I got ready to place them on the colony. I have found also that extracting stimulated brood rearing precisely as does feeding, and that when I extract the honey stored in the upper parts of the frames, the queen will deposit her eggs in the cells from which the honey is extracted, and the bees will at once occupy the sections and begin storing therein.

When a flow of honey is coming in from the fields, there is no trouble at all in getting frames well filled out, and sections well filled out also, if care is taken to provide the proper facilities. Those who claim that the instinct of the bee is all-wise, and allow it to work its sweet will, must fall far behind in the race, with him who uses his reason in directing (not forcing) that instinct to work for his own advantage. If the extractor could be used for no other purpose than simply giving the queen room to deposit her eggs in the location desired by the owner, it would well pay for itself in a very small apiary; and with myself, after a fair trial, I find it will do so much more easily, simply and cheaply than can be done by any arrangement I have yet seen or heard of in the way of reversing or reversible frames.

I speak only for myself; others may view the matter differently; but my

candid opinion is, that reversible frames, like many other new things, will soon be laid away as cumbersome, troublesome, and not sufficiently valuable to pay for the time needed to operate them.

The idea of reversible frames may prove a profitable speculation to the supply dealer for a short time, but no one else, in my opinion, will ever realize any profit from them. Let those who may choose, test them if they like, but as for me I want no more of them.

Foxboro, Mass.

For the American Bee Journal.

Comb Honey-Rack Again.

JOHN HODGSON, JR.

I send you another engraving of my honey-rack with description and improvements, as the former cut and

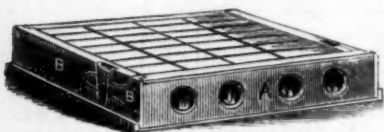


FIG. 1.—Rack with side closed.

description given on page 96 of the BEE JOURNAL for 1883 did not give a correct idea of the rack. This second mention of it is due to many who have been making a multitude of inquiries about this rack, and other honey-racks.

Figure 1 represents a closed rack with a honey-board with slats (which can be made any width to suit the

3-16 of an inch by loosening or tightening the wedges.

The row of sections on the top, in Fig. 2, are full and removed, and the section-board C is being put in their place. This cut and the description given above will enable any one, by careful examination, to understand this rack.

Pewaukee, Wis.

Read at Arcadia Farmers' Convention.

Bee-Keeping for Profit.

E. A. MORGAN.

There are very many works treating upon this subject, which are more or less a help to the beginner; but what I have learned is by experience, and in many instances it has been dearly bought. To succeed in this business, a person must first understand the natural laws governing the honey-bee. He can then tell at a glance what should be done to promote their best interests. For as Josh Billings says, "A bee is sudden in his impressions, and hasty in his conclusions." It is therefore very necessary to do what you do, just at the right time, to secure the best results.

Many farmers in this vicinity have tried bee-keeping from time to time, and are satisfied that it is very profitable, and while all was favorable they made it pay well, but sooner or later something turned up which they did not understand, and all were lost.

In bee-keeping, as in all other pursuits, it is all important to make a good beginning; and to do this, it is as important to get good stock as it is with your cattle, horses, or hogs. Having obtained this, next in import-

combs, which, being shallow and open at the top, admits of the bees going directly into the surplus boxes from the main hive; and being directly above their brood, they receive the heat of the cluster, which is very essential, especially in cool weather, to aid them in manipulating wax. This hive can be made to accommodate any sized colony by the use of a close-fitting movable division-board. This hive is not too large nor too small, and will receive surplus receptacles for 50 pounds of honey, and can be tiered up to any height desired. It is not, however, the best out-door wintering hive, on account of its shallowness. Bees in this hive require some sort of winter protection; but when we figure its advantage as a summer hive, above the cumbersome and costly out-door wintering hive, we can well afford to pay the difference of winter preparation required for this hive.

Just a word about boxing for surplus honey. Many beginners and inexperienced bee-keepers constantly encounter difficulties in first getting their bees to go up into the boxes; and after the first set of boxes have been filled, much valuable time is often lost in finishing and capping the sections, and getting the bees to begin anew in other boxes; and not unfrequently a strong colony will send out a new swarm in preference to making a beginning in new boxes, which, of course, is very ruinous to their owner. In short, the profit of the apiary, where it is run for surplus, is governed largely or wholly by the amount of box or section honey stored, and this depends entirely upon the readiness with which bees can be made to work in boxes. Since the time in which bees store surplus honey is divided into short seasons during the summer, known as honey flows, it is all important that the bee-keeper has his colonies in condition to "improve every shining hour" to the best advantage, as these honey flows are sometimes "few and far between." My plan of boxing is to use foundation starters in all sections, and put on but one crate at a time, as it is not difficult to induce bees to work in one crate, where it would be impossible to start them in three or four. When one crate is about half filled, put on another, and so on until the frames are covered, making it a rule to take off the first crate of honey before the last empty box is put on, so that but one filled crate is taken off and one empty crate put on at any one time, thus avoiding the necessity of much sudden change, and removing the difficulty of starting bees in a full new set of boxes. This process of rotation, if carefully adhered to, will sometimes save hundreds of pounds of honey to an ordinary bee-keeper, in one season. One more suggestion on this point. Arrange your crates so that the sections will run parallel with the brood-frames, thus giving the bees a free passage into the boxes, and not merely a small square hole, as is the case when they are placed at right angles, which is often the cause of much delay and

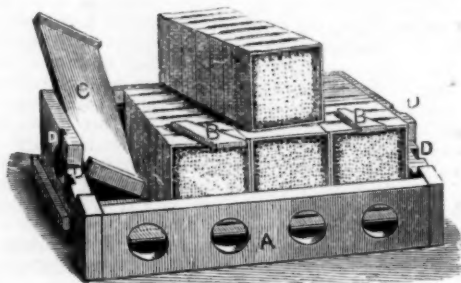


FIG. 2.—Rack with side opened.

width of sections used), and with a full set of sections in place. The portable side A is held in its place by the V-shaped beveled wedges B B. The section-board C in Fig. 2 is intended to take the place of a row of sections, when it is necessary to have the bees work in only a part of a set; and when there is a shortening up in the honey flow, then one or more of these boards can be used.

Figure 2 shows a rack with the wedges B B removed, the portable side A loose, and the section space open to remove from or fill with sections as the case may be. The wedges B B are of great advantage in case of the sections swelling or shrinking, as the side A can be let out or drawn up

once is a thoroughly practical hive. And in bee-keeping for profit, it is necessary that the main feature of the hive should be simplicity, which would at once exclude doors, drawers, and traps of all kinds. The combs should be movable, so that the operator can, in a moment's time, remove any or all of them to another hive if necessary, which is often the case in spring when clogged up with dead bees or dirt. All hives and frames should be alike, and the frames interchangeable, which is very necessary in feeding, in strengthening weak colonies from strong ones, in extracting, in queen-rearing, and in many other things. For this climate I would recommend the Langstroth hive, holding 10 frames or brood

tardiness in getting bees to work in boxes.

Had my paper been on the "Honey-Bee," I could doubtless have made it more interesting than on keeping bees for profit; but will say this much for the bee or race of bees to be kept for profit: that after having tried several races, I am decidedly in favor of the Italians, for the following reasons: 1. They possess longer tongues, and can, consequently, gather from flowers which are useless to the black bee. 2. They are more active, and with the same opportunities, will gather much more honey. 3. They work earlier and later, not only of the day, but of the season. 4. They are far better to protect their hives against robber bees. Bees which attempt to rob Italians of their stores, soon find that they have "dared to beard the lion in his den." 5. They are proof against moth millers. 6. The queens are far more prolific, and breed up faster in the spring. 7. The Italian bee is more hardy, longer lived, and stronger of wing than other breeds. 8. And lastly, they are more amiable. A stock of pure Italians may be handled without the least danger of stings.

And now I will close by speaking of their advantage to the farmer, other than by supplying his table with honey, and filling his pocket with money. All bees feed exclusively upon saccharine juices or nectar of flowers, called honey, and the food of their young in the larval state, is the pollen of flowers, called bee-bread.

The honey-bee was not only created to gather the nectar from each opening flower, and store it in shape for food and medicine for mankind, but at the same time there was a double purpose intended. They were made to perform a very important part in the economy of nature—that of the fertilization of flowers, which depends upon the contact of the pollen with the stigma; and, as if to secure this object more perfectly, in their search for honey and pollen, they pass from flower to flower of the same kind, and are never known to visit two varieties of flowers on the same trip, as many have supposed. It is indeed wonderful how so small an insect can be made to do so great a work, and governed by natural laws, they become most populous at the season of the year when most needed in this work. It is estimated that not more than one-half of the blossoms on our fruit trees would bear fruit, were it not for this agency. The bee, eager for the nectar secreted in the flower, plunges into the blossom, covering himself with its pollen dust, and thence to the next, scattering it there, and so on.

When we realize that in a strong working colony there are 50,000 of these workers, and that each one makes hundreds of trips each day, we can readily see how much may be accomplished in one day's time. And it is indeed possible that the nectar there secreted was for the sole object of attracting the insects thither, that they might accomplish this work.

Farmers are becoming more acquainted with these facts, and it is

very noticeable that in sections where many bees are kept, the fruit crop is more abundant, and the clover yields far more seed. Only a short time since I saw an article on the transportation of bees to Australia, where the clover has never been known to bear seed. Some one suggested that bees might be made to distribute the pollen.

The experiment was tried, and it is reported that in the vicinity where the bees were stationed, the clover, the present season, has borne seed, thus proving conclusively that their work alone wrought the change.

For the American Bee Journal.

Reply to W. F. Clarke.

JAMES HEDDON.

I shall have to ask my old friend, Mr. Clarke, to excuse me for not taking a firmer "hold" of him in the "Priority of Location" controversy. If he will not again blame me for "taffying" him, I will say that it is very difficult for me, or any other apicultural writer, to keep a "good square hold" of him when we cross the swords of sharp sarcasm; and as far as the philosophy of the subject at issue was concerned, truly I did not discover much to get "hold" of.

As sharp and pointed as Mr. Clarke takes hold of me, he is not faultless in his logic, nor correct in his assertions. Because I am, the present season, increasing the stock of my field, is not "an admission that I have underrated it in the past," or that the field is in any way improved. I am doing this to put to test the results and standard of overstocking in this locality. Regarding the elegant and classical caption of Mr. Clarke's article, I have only to say that Mr. Clarke has misapplied it. I need no "burrow." I will try to prove my claims. I feel that time and experience will assist me.

I do not say that no one can form a correct conclusion regarding any point in apiculture who is only an apicultural dabbler, but I do say this, that being only a dabbler is the mantle that practical producers throw over the heads of those who almost always get the impractical theory side of such subjects.

I think Mr. Clarke is mistaken, and I imagine that more than nine-tenths of the honey-producers of this country think that he is mistaken. He can convince me that he will not "always be in error on this subject," when either he or I see our mistake.

Mr. Clarke's comparison in his last paragraph is entirely unfair. Why could he not compare my position in the science of apiculture with a similar position of some one in another science? Why could he not have said, if Mr. Heddon says that editing a daily newspaper is not labor; is only just child's play; that dull, prosy items take as well as sharp and spicy ones, he is mistaken, and nothing will set him right, but to depend upon holding such a position for the bread and butter of his family. "In the

realm of the unknown (and that intellectual giant, Herbert Spencer, says, 'possibly the unknowable'), ALL have an equal right to guess."

No doubt the "Priority of Location" subject has gone its normal length. Mr. Pond is reduced to one stale law-point. Mr. Kendall appreciates anew the old law of logic, viz: Never back up a strong point with a weaker one, for an opponent will cunningly attack the weaker one, entirely ignoring the one he cannot answer.

Dowagiac, Mich.

Pacific Rural Press.

Marketing Extracted Honey.

WM. MUTH-RASMUSSEN.

A paper published in Los Angeles, *News and Recreation*, contains an article complaining of the unjust and exorbitant fare exacted from honey-producers. Not only the weight of the cases, but also that of the cans, including the weight of what honey adheres to the inside of the can after it is emptied, is deducted from the gross weight. The same cans are frequently returned to the bee-keeper, who has to pay for them over again, besides cleaning them and paying the return freight charges. While I have suffered from this extortion myself, and admit that there is just cause for complaint, I cannot help feeling that the bee-keepers themselves are in a great measure to blame for this state of affairs. Finding that new cans, made to order in the tin-shops, were too expensive, they adopted second-hand coal-oil cans, which, after being properly cleaned, might do well enough for manufacturers and other large consumers of honey, but were unsuitable for the retail trade. Aside from the more or less founded objection to the previous use of these cans, very few customers will buy such a quantity of honey at one time. This same objection, being once fixed in the public mind, will be slow to disappear, even if entirely new cans should be used for the purpose, particularly if the new cans retain the same size and shape as the old coal-oil cans. The consequence is, that a new trade has sprung up, whose business it is to place the honey before the public in smaller and more attractive packages, without which there would hardly be any sale for honey at all.

Producers of comb honey have long ago taken the matter into their own hands, and thereby remedied the evil of too much tare. None of them would now think of placing whole caps of honey, built irregularly through the frames, on the market. The popular one and two-pound sections are sold with the honey; the sections are so light that nobody objects to paying for them, while the producer gets his money back and really loses nothing by buying the sections. If all producers of extracted honey would insist on being allowed the actual cost of the cans, including purchase price, freight charges and

cost of clearing and repairing them (without talking about selling the cans by weight at the same price as the honey), and would agree not to sell any honey unless this demand was complied with, they might accomplish their object, although I well know that it is very difficult, if not impossible, to get a large body of men, competing with, and more or less jealous of each other, to sign such an agreement; and without concerted action it would be useless to try this remedy.

But there is, in my opinion, a better way of doing it. Producers of preserved fruit, meats, fish and other canned goods, as well as of wine, tobacco and many other articles which enter into the daily consumption of the public, do not place their wares on the market in bulk. True, some of the articles are re-handled by packing firms, but many of them are put up in retail packages by the producers themselves. Why cannot the bee-men do the same? They have a large amount of leisure time during the winter which might be well employed in making cans. They are all used to handling the soldering iron, and, with a little practice, can do such work as well as a professional tinner. Material in the flat can be procured at one-half the cost of ready-made cans, and, considering the small bulk, at much less freight. For sealing-wax, made of equal parts of rosin and beeswax, with which to close the cans, they have one-half the material at home and do not need to buy it.

I will give a little of my own experience when I first settled in this part of the State. I put most of my honey up in new ten-pound, screw-top cans, charging 25 cents extra for each can, as the actual cost of the cans laid down here. I never heard any complaint of this extra charge, as I advertised that customers might bring their own vessels, and thus avoid paying for the can. But after awhile the honey would granulate, and some would object to the trouble of melting it, or the difficulty of getting the liquid, but thick honey out of the can in cold weather, while others who preferred the candied honey, disliked cutting the can and thereby spoiling it for future use. To obviate this trouble I adopted the "Jones" honey cans," made like ordinary fruit cans, having a large cover which can be secured with sealing wax. As before, I charge the cost of the cans, get fair wages for my time and work in putting them up, and obtain a living price for my honey. As the cans, after being emptied, are useful for preserving fruit, and for many other purposes, nobody objects to paying for them. The handsome labels, with which the cans are adorned, no doubt help the sales considerably, and my name and address on the label are a guarantee that the contents are as represented, and not adulterated. Some may put up honey in irregular sizes of second-hand, picked-up cans, and a certain class of customers will buy them, thinking that—the contents being the same—it does not matter about the style of the can, if they can get it a little cheaper. But the ma-

jority will insist upon having my honey, because the irregular style and size of the package assure them that they get what they pay for.

The sizes, which I have found most suitable for the retail trade, are 2½ and 5-pound cans, the difference in favor of either being almost imperceptible. I have shipped such cans in cases holding a dozen of the former, or one-half dozen of the latter, by team, rail and pack-animals, without any loss by breakage or leakage; and, as the honey always granulates here in the fall, there would be no danger, even if the sealing-wax should get broken. For home storage, or when short of small cans, I use 60-pound cans, but never sell any unless ordered or called for at the apiary. If the bee keepers as a class would follow my example, I am sure they would have the same experience to the mutual satisfaction of themselves and the public at large. Let them once agree to use a few standard sizes of small packages, and, when found suitable for their market, forever after strictly adhere to them, and I have no doubt that they will wonder at and regret that they did not try it long ago, and thereby establish a good reputation, a lively demand and a fair price for the honey. Independence, Cal.

Norfolk, Ont., Convention.

The 14th regular meeting of the above association was held in Simcoe, Ont., on June 7. The 1st Vice-President, Mr. Moses A. Kitchen, in the chair. The minutes of the last meeting were read and adopted.

Questions were answered as follows:

1. Which is the better for bees, during the time of breeding, honey or pollen? After a full discussion, it was decided that both are absolutely necessary.

2. What is the cause of so many bees leaving their hive in the spring? There are various causes; but the principle one is a need of supplies.

3. When a colony finds itself queenless, and then rears a queen of its own, is it advisable to leave this queen with the colony? No; for when the bees find that they are without a queen, they are sure to set about rearing one from a larva already 8 or 9 days old, and which has previously received no special nourishment; and the result is sure to be an imperfectly-developed queen.

The next question that came before the association, was one concerning adulterated honey. Some one had said that a bee-keeper had placed adulterated honey on the market. A sample of the article being produced, was examined by experts, and pronounced to be undiluted, but of an inferior quality; having been gathered late in the season, and not properly ripened.

After discussing other matters, the meeting adjourned to meet at 2 p. m. on Saturday, Sept. 6, at the residence of Mr. Moses A. Kitchen, on the gravel road between Bloomsburg and Waterford. All are cordially invited to attend. ELIAS CLOUSE, Sec.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

How to Clean Barrels for Honey.

I have some barrels to clean, and I have been trying to clean them with hot water, but I cannot get the smell out of them. Would whisky barrels need to be free from smell so as not to injure honey? Can wine barrels or other barrels be cleaned through the bung-hole so as not to sour or taste the honey? The spring has been very poor for bees in this part of the land. We had a very heavy frost and killed all the fruit bloom. Bees wintered well here last winter. GEO. KEMP. Navan, Ont.

ANSWER.—Yes; hot water persistently used will cleanse your barrels fit for honey.

Why do the Bees do so?

On the 19th we had a swarm from one of our hives, and on the 26th we cut out all the queen-cells but one; to-day the bees acted, for quite awhile, as if they were going to swarm, flying in and out of the hive, making quite a noise. Please tell me the cause of this commotion. A NOVICE. Jerseyville, Ill., June 30, 1884.

ANSWER.—I think that you must have left a second cell, or else the bees concluded that they must have one, and thought of swarming with the queen that hatched.

Swarming Fever.

Bees are now working lively on white clover, of which we have an abundance. Where allowed to swarm they are making good use of it. One of my neighbors had one colony that swarmed and returned five times, having been hived 2 or 3 times. The owner is a beginner in bee-keeping, and did not understand how to manage them to save such trouble. I was there the other morning, and they were hanging out in abundance. I told him if the queen could be found the colony could be divided so as to make it the same as if it had done its own swarming. So we went at it and found a mystery that I would like to have solved. We found plenty of queen-cells in different stages of development, but could find no queen, and the age of the brood showed that there had been no laying queen for 4 or 5 days, for there was no eggs nor fresh hatched larvae. It had swarmed the day before, and I believe every day preceding for 5 days. So we divided it by making a division of the bees, giving each part some queen-cells, supposing the queen was lost. But to our surprise, the next day, the part that contained the greater part of the bees swarmed again; it being the part that was set away, and the part that we supposed contained the

queen, if there was any, as we brushed the most of the bees into that part and gave it two combs with 2 or 3 queen-cells. There was no indication that any young queen had hatched out. Now, what I wish to know is, will a queen cease laying during a swarming fever? He had another that had been out and returned. This we divided also, but did not find the queen, but found eggs and brood in all stages. So we divided it on the common rule, by putting in a comb of brood in the new hive on the old stand, brushing the bees into the new hive and setting the old hive in another place. This one is doing all right.

J. W. SANDERS.

Le Grand, Iowa, June 25, 1884.

ANSWER.—Yes; we have known such cases, where just as soon as the efforts at swarming began, the queen ceased to lay, and was undoubtedly the condition of affairs in the case you mention.

Maltine.

Have American bee-keepers made any trial of maltine (or extract of malt) to feed the bees, with honey, as a remedy for the so-called diarrhoea? If not, I would recommend it. I think it is worthy of a trial, and would prove of service if "the pollen theory" be correct.

A NEW ZEALAND BEE-KEEPER.
Pukekohe, N. Z., May 26, 1884.

ANSWER.—I know of no one who has ever tried maltine, nor can I understand how it can assist us in preventing diarrhoea among our bees, whether "the pollen theory" be correct or not. The latter theory is based upon the idea that nitrogenous food should be avoided in winter, and I should suppose that maltine would rank higher than honey as such food, and thus tend to increase rather than decrease the tendency towards the disease.

Tiering up Sections.

I have a very strong colony of bees. I have 8 frames in the brood-nest, and two tiers of sections; 42 sections in both. They are clustering in front of the hive, very much. I thought they were about to swarm, so I looked for queen-cells, and there was not one started. The top tier of sections are almost finished, but not quite ready to take off. The under tier is ready to cap. Should I give them another tier or not, as white clover is drying out on account of the drouth? If I should give them another tier, and the flow of honey is getting poor, will they finish the upper tiers or not? I have no experience, or I would not ask such a question, but it is of importance to me, as I want to get all the salable honey I can.

S. M. HICKEN.

Dell City, Del.

ANSWER.—This question hits a vital point, and is one that may well be asked by the inexperienced. You seem to have about the right idea of it. If you had, as we have, a bass-wood crop just opening, you should

put on a third case, because you could not afford to lose a case of honey to get another finished a little sooner; but the lying out of your bees, indicates one of two conditions, viz: that either your hive communications are faulty, and your bees exposed to the direct rays of the sun, or else that the flow is drying up. Supposing the latter to be the case, just leave the cases as they are until finished, or another flow begins. Take them off as soon as finished.

Candied Honey in Kegs.

How is honey handled after it is candied, to put up in pails and cans? My idea is to cut it out of the kegs and put in a double boiler and liquefy it, then run it in the jars, pails, etc. Is that right? I am going to try and build up a trade on extracted honey, and as we have a city of over 15,000, I think I ought to sell large quantities of it.

R. B. HOLBROOK.

Winona, Minn.

ANSWER.—The better plan is to draw it into the cans just before candying takes place. If too late for that, I would place the candied honey in a warm room to soften just enough to settle down compact into the pails or cans.

Wax Production.

Most of us now use comb foundation to save bees the labor of wax building. But in the market wax seems to be more valuable than honey. Would it not be possible to invert the process, and by supplying the bees with honey and rye flour for pollen, and denying them comb foundation to induce them to concentrate their energies exclusively to the production of wax?

W. H. BARLOW.

Charlottesville, Va.

ANSWER.—As I understand it, the use of comb foundation not only as a perfect guide to straight combs, but in full sheets as a guide to all worker cells, and a material of economy, paid all through the season of 1883. It is no dearer in price this season. My idea is that it pays me well now. I am, the present season, using nearly one thousand dollars worth. I am of the opinion that I am gaining by so doing. I know that honey may run down so low that this material can hardly be afforded in full sheets; but it has not, as yet. I do not believe that we can ever produce wax at a profit at any price it is likely to go to.

Honey Candying, etc.

I find the bees in this county in fine condition, and gathering plenty of honey. I transferred one colony, and they filled 3 frames and put about 10 pounds in the boxes in 5 days. I found in two places where bees are putting candied honey in their new combs; it seems that it candies as they gather it. What do they get it from? I sold some of my first honey in one-pound sections for 20 cents each, this year. We had a heavy honey dew this year. What credit

should a queen have for cells taken from her hive, on the Apiary Register? I have one colony that I have reared 8 from. I take the frames out that have the cells on them.

H. C. AUSTIN.

Austin's Springs, Tenn., June 27.

ANSWER.—I am unable to say, not knowing much about your Southern plants. We all know that honey from some sources candies almost as soon as stored. It is further true, that in this respect, honey from the same plants varies in different seasons.

Regarding the credit you should give the colony you take cells and combs from, your own judgment as to the force you deprive them of should be best.

Local Convention Directory.

1884. Time and place of Meeting.

Oct. 11, 12.—Northern Mich., at Alma, Mich.

F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.

W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.

Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.

A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.

H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bee-Keeping in New York.

I had 12 colonies of bees last fall, and wintered 10. I have had eight swarms which are in 7 hives, and doing well. They are gathering honey from white clover and Alsike. The yield from Alsike seems to be abundant. Farmers are sowing Alsike quite extensively now, which is fine for bee-pasturage. The spring was wet and cold until in May, since that time it has been growing warmer until now it is dry and the air sultry. Although my bees have plenty of shade, I have covered the hives with boards to protect them from the heat. The thermometer indicated 92° in the shade at 2 p. m. to-day.

WM. A. BRUNDAGE.

Lodi, N. Y., July 2, 1884.

Eccentricities in Queen Breeding.

I have had beautiful golden Italian queens mate with a black drone in a tent, and the first workers would be of golden color, but in the course of a month the workers would be all black; a month later they would be all mixed in color. A black queen mated with an Italian drone, in confinement gave similar results; the first bees would be black, later ones yellow, and still later, mixed. Further experience has shown that if an Italian queen mates with a black drone, the yellow is predominant, and vice versa. Have any readers of the BEE JOURNAL noticed similar facts?

Milford, Ill. HUGO VOLLAND.

Good Honey Yield.

We are having a fine honey flow, and have had a very heavy fruit bloom this spring. Our winter here was very cold and severe, and the spring was late, so that many colonies of bees was transformed into the "stingless variety." However, the excessive swarming that is now going on, will more than repair the loss. There are many bees kept in this part of the State, but only a few persons appear to know how to manage them, so as to obtain the best results. Since keeping bees and practicing "beeology," in this locality, many have taken the "bee-fever" and embarked in the enterprise with good results, and if the "fever" does not become too contagious (so as to overstock the country), we may expect good returns; for this year we have a prospect of a large increase in bees and a good crop of honey. A. W. FISK.

Bushnell, Ill., June 30, 1884.

Apiarist or Apiator?

I notice that Keys calls a bee-keeper an "apiator." Do you think that will do as well as apiarist?

J. M. SHUCK.

Des Moines, Iowa, June 25, 1884.

[No; we very much prefer to follow Webster's Dictionary, and use the word "apiarist."—Ed.]

That Deep-Celled Foundation.

A few days ago I sent for a sample of the Weed foundation. I wanted to try it on a small scale before buying much. I thought that more was claimed for it than ought to be claimed for any foundation, that it cannot sag nor break down, and when the bees so readily accept of it, it must be an improvement on the old kind. The piece that I obtained, I put into an old comb just as I would a queen-cell; when next I saw it, a day or two afterwards, the bees had it drawn out and filled with honey. I think it is a pity this was not found out long ago. I have 20 colonies of bees; lost one last winter. They were on the summer stands packed with straw and chaff; they are doing very well.

M. HIGGINS.

Windsor, Ont., June 20, 1884.

Bees Doing Nicely.

Basswood will be in blossom in a few days, then I hope to see them "boom," as white clover is nearly gone, unless we have more rain very soon.

ARAD C. BALCH.

Kalamazoo, Mich., June 30, 1884.

Large Honey Flow.

My bees are doing well—storing 10 pounds per colony each day. I have only had 2 swarms yet; they were from the Italian colonies. The Cyprians stick to their home as long as they have room. There was a heavy loss of bees last winter, but they are increasing rapidly now.

D. R. ROSEBROUGH.

Casey, Ill., June 23, 1884.

Prospects for Honey in California.

Summer has now actually come, and California has now emerged from the "clouds;" and in the place of heavy fogs and drizzling rain, we have bright sunshine and clear blue skies. All seem to welcome this delightful weather with a thankful heart, but no one more than "the little busy bees," whose joyous and contented hum may now be heard from early morn until the setting of the sun. The faces of the bee-keepers have now a contented smile, in spite of their effort to look grave and pre-occupied. In this section, the black sage is almost out of bloom. The wild alfalfa is at its best. White sage is just coming in, while sumac and wild buckwheat are yet to come. The rains in California have been, this year, unusually late, and as a matter of course the bees have not had good weather for work; but, notwithstanding the lateness of the season, the prospect is good for a fair crop. As a general thing, bees are in most excellent condition.

J. E. PLEASANTS.

Santa Ana, Cal., June 25, 1884.

But few Swarms.

Bees are very slow about swarming, this season. I have only had 4 swarms, up to this date, out of 49 colonies. The season has been very wet. White clover is now abundant.

SAMUEL C. WARE.

Towanda, Ill., June 27, 1884.

Transferring Bees.

I have 15 colonies of bees that I wish to transfer from box hives to movable frames. Mr. Heddon, on page 412 of the BEE JOURNAL for 1884, refers me to page 367 of the BEE JOURNAL for 1883. Will you please publish the part about transferring bees, and oblige a subscriber.

J. F. McMILLAN.

Healy, Ill., June 29, 1884.

[As there have been several calls for that article to be re-published, we here give the new plan as described by Mr. Heddon.—Ed.]

About swarming time I take one of my Langstroth hives containing 8 Given pressed wired frames of foundation, and with smoker in hand, I approach the hive to be transferred. First, I drive the old queen and a majority of the bees into my hiving box. I then remove the old hive a few feet backward, reversing the entrance, placing the new one in its place, and run in the forced swarm. In two days I find 8 new straight combs with every cell worker, and containing a good start of brood. Twenty-one days after the transfer, I drive the old hive clean of all its bees, uniting them with the former drive, and put on the boxes, if they are not already on. If there is any nectar in the flowers, the colony will show you comb honey. About the queens: I usually kill the forced queen as the bees run in.

I run them together as I would one colony in two parts. Now to the old

beeless hive; of course there is no brood left, unless a little drone brood, and we have before us some combs for wax, for more foundation, and some first-class kindling wood.

If you have no method by which you can use a full hive of frames, of full sheets of foundation, running a full swarm into them at once, by all means procure it without delay.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 7, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@8c for extracted. Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. CHAS. F. MUTH.

NEW YORK.

HONEY—Present sales of comb honey are slow, and will be until the new crop arrives. We quote: Fancy white 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market. Extracted, white, 8@9c; dark and buckwheat, 7@8c.

BEESWAX—Prime yellow, 34@35c.

McCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2½-lbs. to 2¼-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—The new crop of comb honey is coming on the market, and nearly all of the arrivals to note are in good order, and the quality of the honey is of the best, being white, and flavor that of clover and Linden; frames are unusually well-filled. The crop of comb honey of 1883 is nearly all cleaned up. We have not had any old comb honey to offer for several days. Extracted honey is in very light demand, and prices irregular; the stock of it is large.

BEESWAX—Not plentiful, but the demand is also light at 30@37c for fair to prime.

H. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Only small lots of new crop have thus far arrived. There is no urgent inquiry at present, and considerable difference exists between the views of buyers and sellers as to values. Small lots of new white comb have been sold at 15@18c. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 5@7c; dark and candied, 4@—.

BEESWAX—Wholesale, 27¼@30c.

STEARNS & SMITH, 433 Front Street.

KANSAS CITY.

HONEY—No change to note in prices. As predicted in last report, the temporary activity was only accidental, and last week has been dull. Some little new honey is now arriving, but it falls as yet to tempt buyers to any extent. I look, however, for a very large demand a little later, and would suggest shipment by Aug. 1, of all that is ready in quantities to justify. I have still a few more "Suggestions on Packing and Shipping Honey," to mail free on application. I will also furnish shipping stencils free to any one desiring to ship to me.

BEESWAX—Nominal, at 30@35c.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 8@9c.

BEESWAX—Firm at 32@33½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 16@17c; extracted, 7¼@8c.

GEO. W. MEADE & CO., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for \$5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

We now club the *British Bee Journal* and our Monthly for \$2.50, or it and the Weekly for \$3.50.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages).....\$1 00
 " 100 colonies (220 pages)..... 1 25
 " 200 colonies (420 pages)..... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, \$2.00; Monthly, \$1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar they send direct to this office, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and \$6.00, we will make an additional present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with \$10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for \$3, or in paper covers for \$2.75. The Monthly BEE JOURNAL and the book, \$1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is \$1.50 bound in paper covers, or \$2.00 when bound in cloth.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

For \$2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for \$1.75. Or, bound in cloth, with Weekly, \$3.00; with the Monthly, \$2.40.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Advertisers' Opinion.

My advertisement in the BEE JOURNAL, has brought me over 400 responses.
 DR. G. L. TINKER.
 New Philadelphia, O.

The queen business is rushing, and we think the BEE JOURNAL deserves much credit as an advertising medium.
 E. A. THOMAS & Co.
 Colerain, Mass.

Having advertised in the AMERICAN BEE JOURNAL quite extensively for the past two years, I would say (without solicitation) that it has sold more queens for me than any other three periodicals I have ever tried.

My bees are in fine condition this spring. I have lost but 4 out of 182 colonies. The outlook is fine for a good season.
 L. J. DIEHL.

Butler, Ind.

The BEE JOURNAL does its advertising wonderfully well. It brought to me responses from Canada to the Gulf of Mexico, and from the Alleghanies to the Rocky Mountains.

WM. M. ROGERS.

Shelbyville, Ky.

A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

Cook's Manual in cloth and the Weekly BEE JOURNAL for one year will be sent for \$3. Manual and Monthly, \$2.00. We have no more of the old edition left, and, therefore, the club price of that edition at \$2.75 and \$1.75 is withdrawn.

DR. FOOTE'S HAND BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the utmost importance to everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat, How to Eat it, Things to Do, Things to Avoid, Perils of Summer, How much to Wear, Overheating Houses, Ventilation, Influence of Plants, Occupation for Invalids, Superfluous Hair, Restoring the Drowned, Preventing Near-Sightedness.	Parasites of the Skin, Bathing—Best way, Lungs & Lung Diseases, How to Avoid them, Clothing—what to Wear, How much to Wear, Contagious Diseases, How to Avoid them, Exercise, Care of Teeth, After-Dinner Naps, Headache, cause & cure, Malaria Affections, Croup—to Prevent.
---	--

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chills, Cold Feet, Corns, Coughs, Cholera, Diarrhoea, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Frolics, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Iry Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only 25 Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,

923 West Madison Street, CHICAGO, ILL.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for "discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

What they Say of it:

From Prof. A. J. Cook, Lansing, Mich.—"I have greatly to thank you for getting up the exquisite little Convention Hand-Book. Surely the old 'saying' is true—being a thing of beauty, it ought to be a joy forever."

From Mr. A. I. Root, Medina, O.—"Send me—dozen of the Convention Hand-Books. We have had quite a number of inquiries for something of that sort, and yours seems to be quite nicely gotten up, and just what is wanted."

From Mr. J. E. Pond, Foxboro, Mass.—"The Convention Hand-Book is just the thing. The digest of Parliamentary Rules it contains will prove of great value to every one. I trust it will receive the patronage it so well deserves."

From G. M. Doolittle, Borodino, N. Y.—"I am in receipt of the new Convention Hand-Book, and must congratulate you on the happy thought of such a work, and the neat appearance of the book. It is a work you may well be proud of, both as to the matter it contains, and the splendid material used in its make-up. It will meet a long-felt want; and, were it so that I could attend conventions as in former years, ten times the price would not seem too much to pay for it, for by the instruction therein given, any man could be kept from many a blunder, much to his mortification. I hope in the near future to again be at liberty to go to conventions, when I shall prize the work very highly."

From Mrs. L. Harrison, Peoria, Ill.—"The Bee-Keepers' Convention Hand-Book is a gem. It should be in the hands of every one who attends a bee-convention, and then there will be no need of embarrassment on account of ignorance of Parliamentary Rules. Accept my thanks for sample sent."

From Mr. Jas. Heddon, Dowagiac, Mich.—"The Bee-Keepers' Convention Hand-Book is received. I saw it advertised, but conceived no approximate idea of its great value to bee-keepers attending conventions, until I perused it. Many times the price of my copy would be no temptation for me to do without it. It will make us all want to talk at once, I fear. You deserve the thanks of all, and I herewith tender mine for this helper."

From Mr. G. W. Demaree, Christiansburg, Ky.—"The Convention Hand-Book is the most exquisitely gotten up, and the nicest book in my collection of apicultural works. It contains much valuable information, and especially as many of the presiding officers of our conventions are selected to fill those important positions because of their practical skill as apiarists rather than for their fitness as presiding officers, this little work will fill a long-felt want. Please accept my thanks for your untiring labor to promote the apicultural interest of the country."

From Dr. G. L. Tinker, New Philadelphia, Ohio.—"I prize the Convention Hand-Book very much, and it will be a valuable aid to bee-keepers attending conventions. The questions for discussion are concise, and cover the field of the most interesting and unsettled points in bee-culture. The book will help to systemize convention work, and enable the members to do business properly."

From Mr. W. Z. Hutchinson, Rogersville, Mich.—"If every bee-keeper would read the Convention Hand-Book, and profit by its perusal, our Conventions would be more orderly and have more beneficial."

From Mr. George Hilton, Fremont, Mich.—"I think the Convention Hand-Book is destined to fill a long-felt want, and should be in the hands of every intelligent bee-keeper."

QUEENS!

BY RETURN MAIL,

FROM OUR NEW STRAINS OF

ITALIAN AND ALBINO BEES.

We are happy to announce to the bee-keeping public that we are now prepared to send you QUEENS on short notice, at the following low rates:

Untested, each\$ 1.00
" per 1/2 dozen 5.50
" per dozen 10.00
Warranted, each 1.10
" per 1/2 dozen 6.00
" per dozen 11.00
Tested, each 2.00
Select Tested, each 2.50

Send for our descriptive Price-List and see what our customers say of our goods.

Address, **WM. W. CARY & SON,**
COLERAIN, MASS.

(The oldest breeders of Italian Bees in America.)

28Atf

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,

1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS, before ordering your **BEE APIARIAN SUPPLIES,** Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER,** Coburg, Iowa.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the British Bee Journal, both for \$3.50 a year.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Townner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884.

H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find \$1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered.—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield) 3 1/2 inch	..\$2 00
Conqueror smoker (wide shield) 3 "	.. 1 75
Large smoker (wide shield) 2 1/2 "	.. 1 50
Extra smoker (wide shield) 2 "	.. 1 25
Plain smoker 2 "	.. 1 00
Little Wonder smoker 1 3/4 "	.. 65
Bingham & Hetherington Honey Knife, 2 inch 1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,

CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now advanced 5 cents per pound above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

BEESWAX.

I pay 32c. per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

HELLO! HELLO!

We are now ready to Book Orders for
Bee-Keepers' Supplies.

White Poplar
Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and
At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,

7A6m WILTON JUNCTION, IOWA.

\$66 a week at home. \$5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine. 4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

FLAT-BOTTOM**COMB FOUNDATION,**

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

GOLD

for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine. 4A1y

LOCAL REPORTERS WANTED.

We want a local reporter in every farming community to furnish us from time to time such facts as we may require. Send 25 cents for credentials and full particulars regarding services and compensation. Address Will C. Turner & Co., Publishers "City and Country," Columbus, Ohio. 24A18t

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**

976 and 978 Central Ave., **CINCINNATI, O.**
Send 10c. for Practical Hints to Bee-Keepers.



37A1y

AGENTS

wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK C., Portland, Me. 4A1y

ITALIAN QUEENS, DADANT FOUNDATION, and Supplies.—It will pay you to send for Circular. **E. F. SMITH,** Smyrna, N. Y. 11A1t

ITALIAN QUEENS AND BEES.

Dollar Queens, 90c.; six, \$5.00; twelve, \$9.00. Warranted, \$1.50; tested, \$2.50; selected, 25 cents extra. Warranted pure. Order now and get choice Queens. Send money by P. O. Order, Registered Letter, or American Express.
27A1t N. F. ASHTON, Davenport, Iowa.

**BUY AN ESTEY ORGAN**

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of **ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.**

ESTEY & CAMP,
188 and 190 State St., **CHICAGO.**

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired Frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

NEW AND USEFUL**Articles for the Apiary**

Send for our 16-page illustrated Circular. 18A1t **HENRY ALLEY,** Wenham, Mass.

BLAINE

Agents wanted for authentic edition of his life. Published at Augusta, his home. Largest handsomest, cheapest, best. By the renowned historian and biographer, Col. Conwell, whose life of Garfield, published by us, outsold the twenty others by 60,000. Outsell every book ever published in this world; many agents are selling fifty daily. Agents are making fortunes. All new beginners successful; grand chance for them. \$43.50 made by a lady agent the first day. Terms most liberal. Particulars free. Better send 25 cents for postage, etc., on free outfit, now ready, including large prospectus book, and save valuable time.

ALLEN & CO.,

26A4t

AUGUSTA, MAINE.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.

Price. 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, \$25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.

923 West Madison Street, **CHICAGO, ILL.**

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apian implements, send for Circular to

PLANAGAN & ILLINSKI,

1AB1y Lock box 965, Belleville, St. Clair Co., Ills.

IF YOU WANT**VEHICLE,**

SEND A POSTAL CARD TO THE

COLUMBUS BUGGY CO.

COLUMBUS, OHIO.

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the **COLUMBUS BUGGY CO.**, Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

AB1t **J. VANDERVORT,** Laceyville, Pa.

1868. 1884.
HEDDON'S
 COLUMN.

BEST GIVEN
COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, $8\frac{1}{4} \times 16\frac{1}{4}$, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these Hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..\$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey.....\$3.00

The above Hive complete for both in one..... 4.50

One Hive in the flat..... 2.00

Five or over, each..... 1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: $4\frac{1}{4} \times 4\frac{1}{4} \times 6$, 7 and 8 to the foot, per 1,000, \$6.50; $5 \times 6 \times 2$, per 1,000, \$8.00. All shipped from here.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from.....\$ 3 00
 Untested..... 1 25
 Untested, after July 1st..... 1 00
 Untested, (per doz.) after July 1st..... 11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
 DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition
 OF
BEES and HONEY,

OR THE
 Management of an Apiary for Pleasure and Profit; by

THOMAS C. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure.
 T. F. BINGHAM.

Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.

H. H. BROWN.

Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, \$1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,

925 West Madison Street, Chicago, Ills.

A Liberal Discount to Dealers by the Dozen or Hundred.

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."

Geo. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,

Lock box 995, Belleville, St. Clair Co., Ills.
 18A13t 6B3t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6×7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, \$1.00.

ALFRED H. NEWMAN,
 923 West Madison Street,
 CHICAGO, ILLINOIS.

A PRIZE.

Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At office address, TRUE & Co., Augusta, Maine. 4A1y

65 ENGRAVINGS

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid.....in May and June, each.....\$.50

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